

What is claimed is:

- 1 1. A pitch dynamics device comprising:
2
3 a pinch plate, said pinch plate is movably attached to a pitching machine; and
4
5 a positioning actuator operationally connected with said pinch plate, said
6 positioning actuator positions said pinch plate effectuating control of the pitch
7 dynamics of a pitched ball from said pitching machine, said positioning actuator
8 in part enables the selection between fast-speed pitch dynamics and off-speed
9 pitch dynamics of said pitched ball thrown from said pitching machine while
10 maintaining said pitched ball accuracy, without changing said pitching machine
11 pitching wheel speed.
12
- 1 2. The pitch dynamics device in accordance with claim 1, wherein said positioning
2 actuator positions said pinch plate in a mostly horizontal position at a maximum distance
3 from said pitching machine pitching wheel to cause said pitching machine to throw said
4 pitched ball with fast-speed pitch dynamics.
5
- 1 3. The pitch dynamics device in accordance with claim 1, wherein said positioning
2 actuator positions said pinch plate in an angled position slowing pitch speed by
3 increasing the amount of pinch between said pinch plate and said pitching machine
4 pitching wheel and moving the pitch release point to an elevated trajectory to throw said
5 pitched ball with off-speed pitch dynamics.
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- 1 4. The pitch dynamics device in accordance with claim 1, wherein said positioning
2 actuator is at least one of the following:
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- 4 i) a pinch plate support leg;
- 5 ii) a handle;
- 6 iii) a handle support;
- 7 iv) a pinch plate support;
- 8 v) a knob;
- 9 vi) a plurality of locking pegs;
- 10 vii) a cam; or
- 11 viii) a solenoid.

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1 5. The pitch dynamics device in accordance with claim 4, wherein said pinch plate
2 support leg further having a slot, said slot controlling the range of motion of said pinch
3 plate support leg and the positioning of said pinch plate.

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1 6. The pitch dynamics device in accordance with claim 4, wherein said pitch dynamics
2 device includes at least two of said pinch plate support leg, a first said pinch plate support
3 leg having a slot of length approximately three-quarters of an inch, and a second said
4 pinch plate support leg having a slot of length approximately one-half of an inch, said
5 first said pinch plate support leg and said second said pinch plate support leg control the
6 positioning and angle of said pinch plate.

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1 7. The pitch dynamics device in accordance with claim 1, further comprising:

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3 a control system interconnect with said pitch dynamics device.

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1 8. The pitch dynamics device in accordance with claim 7, wherein said control system
2 effectuates positioning control of said pinch plate by way of said positioning actuator.

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1 9. The pitch dynamics device in accordance with claim 7, wherein said control system
2 includes a hit pitch detector.
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1 10. The pitch dynamics device in accordance with claim 9, wherein said hit pitch detector
2 utilizes at least one of the following methods to detect whether said pitched ball was hit:
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- 4 i) acoustical detection;
- 5 ii) electronic detection; or
- 6 iii) optical detection.
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1 11. The pitch dynamics device in accordance with claim 7, wherein said control system
2 effectuates a pitch routine that determines the type of pitch to throw and effectuates
3 positioning control of said pinch plate by way of said positioning actuator.
4

1 12. The pitch dynamics device in accordance with claim 11, wherein said control system
2 includes a hit pitch detector, said hit pitch detector determines if a batter hit said pitched
3 ball, said control system based in part on said hit pitch detector determination,
4 implements by way of said pitch routine the type of pitch to throw and effectuates
5 positioning control of said pinch plate by way of said positioning actuator.
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1 13. The pitch dynamics device in accordance with claim 7, wherein said control system
2 includes a plurality of data communication interfaces.
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1 14. The pitch dynamics device in accordance with claim 13, wherein said data
2 communication interfaces include at least one of the following:
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- 4 i) a keypad;
- 5 ii) a touch pad;

- 6 iii) a display;
- 7 iv) an IRDA interface;
- 8 v) a plurality of general purpose input and or outputs;
- 9 vi) a wired interface;
- 10 vii) a wireless interface;
- 11 viii) an RS232 interface;
- 12 ix) an RS485 interface;
- 13 x) a USB interface;
- 14 xi) a user interface;
- 15 xii) an audio interface;
- 16 xiii) a printer interface;
- 17 xiv) a serial communication interface;
- 18 xv) LAN;
- 19 xvi) WAN;
- 20 xvii) TCP/IP;
- 21 xviii) ETHERNET;
- 22 xix) FIREWIRE;
- 23 xx) WIRELESS APPLICATION PROTOCOL;
- 24 xxi) WI-FI;
- 25 xxii) BLUETOOTH;
- 26 xxiii) WCDMA;
- 27 xxiv) IRDA;
- 28 xxv) GSM;
- 29 xxvi) PCS;
- 30 xxvii) GPRS;
- 31 xxviii) 1XRT;
- 32 xxix) CDMA;
- 33 xxx) CDMA 2000;

- 34 xxxi) WCDMA;
- 35 xxxii) CDPD;
- 36 xxxiii) TDMA;
- 37 xxxiv) 2G type compliant;
- 38 xxxv) 2.5G type compliant;
- 39 xxxvi) 3G type compliant;
- 40 xxxvii) 4G type compliant;
- 41 xxxviii) spread spectrum;
- 42 xxxix) a single frequency transceiver;
- 43 xl) a dual frequency transceiver;
- 44 xli) INTEL PRO/WIRELESS 5000 LAN;
- 45 xlii) IEEE 802.11;
- 46 xliii) IEEE 802.11A;
- 47 xliv) IEEE 802.11B; or
- 48 xlv) IEEE 802.11G.

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1 15. The pitch dynamics device in accordance with claim 1, wherein said pitch dynamics
2 device further comprises a brush attachment interconnect with said pitch dynamics device
3 or said pitching machine, said brush attachment disguises the position of said pinch plate
4 and thus disguises the pitch dynamics of said pitched ball to be thrown from said pitching
5 machine.

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1 16. The pitch dynamics device in accordance with claim 7, further comprising:

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3 a tree light interconnected with said control system, said tree light indicates at
4 least one of the following conditions:

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6 i) said pitching machine is preparing to throw said pitched ball;

- 7 ii) said pitching machine has thrown said pitched ball; or
- 8 iii) a batter should swing at said pitched ball.

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1 17. A method of utilizing a pitch dynamics device to change pitch dynamics of pitching
2 machine thrown pitched balls, said method comprising:

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4 a) loosening a pinch plate, said pinch plate being movable attached to a pitching
5 machine;

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7 b) aligning selectively said pinch plate, by way of a positioning actuator, said
8 pinch plate effectuates control of the pitch dynamics of a pitched ball from said
9 pitching machine, while maintaining said pitched ball accuracy, without changing
10 said pitching machine pitching wheel speed, said positioning actuator being
11 operationally connected with said pinch plate, said pinch plate being aligned in at
12 least one of the following positions:

- 13
- 14 i) in a mostly horizontal position at a maximum distance from said
15 pitching machine pitching wheel causing said pitching machine to
16 throw said pitched ball with fast-speed pitch dynamics; or
 - 17 ii) in an angled position slowing pitch speed by increasing the amount
18 of pinch between said pinch plate and said pitching machine
19 pitching wheel and moving the pitch release point to an elevated
20 trajectory causing said pitching machine to throw said pitched ball
21 with off-speed pitch dynamics; and

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23 c) securing said pinch plate in preparation of throwing said pitched ball.

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1 18. A method of utilizing a pitch dynamics device effectuated pitching routine to control
2 the pitch dynamics of pitched balls, said method comprising:

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4 a) positioning initially by way of a control system a pinch plate, said pinch plate
5 controls the pitch dynamics of a pitch to be thrown from a pitching machine to a
6 batter, said control system being interconnected with said pitch dynamics device;

7
8 b) throwing said pitch from said pitching machine;

9
10 c) selecting the pitch dynamics of the next said pitch based in part on a pitch
11 routine executed by said control system or selectively based in part on operator
12 input; and

13
14 d) repositioning by way of said control system said pinch plate effectuating
15 control the pitch dynamics of the next said pitch to be thrown from said pitching
16 machine to said batter; and

17
18 e) returning selectively to step 'b'.
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1 19. The method in accordance with claim 18, wherein selecting the pitch dynamics in
2 step 'c' includes selecting the pitch dynamics based in part on at least one of the
3 following:

- 4
5 i) data communication with a wireless device;
6 ii) data communication with a wired device;
7 iii) a preprogrammed pitch routine;
8 iv) by pseudo random pitch selection;
9 v) by random pitch selection; or

vi) by utilization of a hit pitch detector.

20. A method of utilizing a pitch dynamics device having hit pitch detection to control the pitch dynamics of pitched balls, said method comprising:

a) positioning initially by way of a control system a pinch plate, said pinch plate controls the pitch dynamics of a pitch to be thrown from a pitching machine to a batter, said control system is interconnected with said pitch dynamics device;

b) throwing said pitch from said pitching machine;

c) determining if said batter hit said pitch by way of a hit pitch detector, said hit pitch detector is interconnected with said control system;

d) determining by way of said control system said batter performance based in part on the determination made in step 'c';

e) selecting the pitch dynamics of the next said pitch based in part on said batter performance determined in step 'd';

f) repositioning by way of said control system said pinch plate effectuating control the pitch dynamics of the next said pitch to be thrown from said pitching machine to said batter; and

g) returning selectively to step 'b'.